

CLAIMS

1. A protein comprising
- 5 (a) an HIV Tat protein or derivative thereof linked to either (i) a fusion partner or (ii) an HIV Nef protein or derivative thereof; or
- (b) an HIV Nef protein or derivative thereof linked to either (i) a fusion partner or (ii) an HIV Tat protein or derivative thereof; or
- 10 (c) an HIV Nef protein or derivative thereof linked to an HIV Tat protein or derivative thereof and a fusion partner.
2. A protein as claimed in claim 1 which is a Tat-Nef fusion protein or derivative thereof.
- 15 3. A protein as claimed in claim 1 which is a Nef-Tat fusion protein or derivative thereof.
4. A protein according to claim 1 wherein the derivative of the Tat protein is a
- 20 mutated Tat protein.
5. A protein according to claim 1 wherein the derivative of the Nef protein is a mutated Nef protein.
- 25 6. A Protein as claimed in any one of claims 1 - 5 wherein the fusion partner is a lipoprotein or derivative thereof.
7. A protein as claimed in claim 6 wherein the lipoprotein is Haemophilus Influenza B protein D or derivative thereof.
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8. A protein as claimed in Claim 7 wherein the fusion partner comprises between 100-130 amino acid from the N terminal of Haemophilus Influenza B protein D.
- 5 9. A protein as claimed in any one of Claims 1 to 8, wherein the Tat protein is the entire Tat protein.
10. A protein as claimed in any one of Claims 1 to 8, wherein the Nef protein is the entire Nef protein.
- 10 11. A protein as claimed in any one of Claims 1 to 10, wherein the Tat protein is fused to an HIV Nef protein and a fusion partner.
12. A protein as claimed in any one of Claims 1 to 11, wherein the protein has a Histidine tail.
- 15 13. A nucleic acid encoding a protein of Claims 1 to 12.
14. A host transformed with a nucleic acid of Claim 13.
- 20 15. A host as claimed in claim 14 wherein the host is either Pichia pastoris or E. coli.
16. A vaccine comprising a protein of any one of Claims 1 to 12 in admixture with a pharmaceutically acceptable excipient.
- 25 17. A vaccine of Claim 16 additionally comprising an adjuvant.
18. A vaccine of claim 17 wherein the adjuvant is a TH1 inducing adjuvant.
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19. A vaccine as claimed in Claim 17 or 18 which adjuvant comprises monophosphoryl lipid A or derivative thereof such as 3 de-O-acylated monophosphoryl lipid A.
- 5 20. A vaccine as claimed in any one of Claims 16 to 19 additionally comprising a saponin adjuvant.
21. A method of producing a protein of Claim 1 to 12, comprising the steps of transforming a host with a nucleic acid encoding said protein, expressing said
10 protein and recovering the protein.
22. A method as claimed in Claim 21 wherein the host is *E. coli.* or *Pichia pastoris.*
- 15 23. A method of producing a vaccine of Claim 16 to 20, comprising admixing the protein of Claim 1 to 12 with a pharmaceutically acceptable diluent.
24. A method of preparing (i) an HIV Nef protein or derivative thereof or (ii) an HIV Tat protein or derivative thereof in *Pichia pastoris* which method
20 comprises the steps of transforming *Pichia pastoris* with DNA encoding said HIV Nef protein or derivative thereof or HIV Tat protein or derivative thereof, expressing said protein and recovering the protein.

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